

isolation means provided between each input line and said common output,

C wherein said diode clamp is operable in two modes, a first mode in which voltages are applied to said clamp terminals such that said diodes of said diode clamp are forward biased and hold said input line at a first voltage which prevents a passage of current from said input line to said common output, and a second mode in which the voltages are applied to said clamp terminals such that said diodes of said diode clamp are reverse biased and said passage of said current from said input line to said common output is allowed.

B'

2. (Amended) The multiplexer circuit of claim 1, wherein said isolation means has an isolation diode.

3. (Amended) The multiplexer circuit of claim 2, wherein said first voltage is selected to reverse bias said isolation diode, thereby preventing said passage of current from said respective input line to said common output.

4. (Amended) The multiplexer circuit of claim 1, wherein said isolation means has a capacitor.

5. (Amended) The multiplexer circuit of claim 4, wherein said first voltage is selected depending on a source of an input current, such as to prevent current flowing from said source of said input current.

Subcl

6. (Amended) An electric device comprising:

an array of charge storage elements that are arranged in rows and columns and which are coupled to row and column conductors, said column conductors being arranged in at least one group, each group having a respective common output;

$\beta'$  a multiplexer circuit for switching a selected one of a plurality of current inputs carried by respective input lines to said common output, said multiplexer circuit having, for each input line, a diode clamp with first and second clamp terminals and first and second clamp diodes arranged in series with the same polarity between said clamp terminals; and isolation means between each input line and said common output, wherein said diode clamp operates in a first mode in which voltages are applied to the clamp terminals such that said diodes of said diode clamp are forward biased and hold a first voltage that prevents the passage of current from said input line to said common output, and a second mode in which said diodes of said diode clamp are reverse biased allowing for the passage of a current from said input line to said common output, said multiplexer circuit couples said column conductors of said respective groups to said respective common output; and

a charge measurement device that measures a flow of charge from said common output.

7. (Amended) The electronic device of claim 6, wherein said charge storage elements have photosensitive pixels including a photodiode and a switching diode.

8. (Amended) The electronic device of claim 7, wherein

said isolation means has an isolation capacitor.

9. (Amended) The electronic device of claim 8, wherein during said second mode charge flows from each input to said respective isolation capacitor, and wherein said diode clamp is operable in a third mode in which voltages are applied to said clamp terminals such that said diodes in said diode clamp are forward biased and hold said input line at a second voltage which causes charge stored on the isolating capacitor to flow between the isolation capacitor and the charge measurement device.

B' 10. (Amended) The electronic device of claim 7, wherein said first voltage is selected to reverse bias said switching diode.

11. (Amended) The electronic device of claim 6, wherein said charge storage elements comprise capacitive pixels having two diodes and a variable capacitor, the current measurement being used to determine the capacitance.

12. (Amended) The electronic device of claim 11, wherein said isolation means has an isolation diode.

13. (Amended) The electronic device of claim 11, wherein said pixels have capacitive fingerprint sensing elements in which the capacitance of said variable capacitor is determined by a fingerprint portion overlying a pixel.

---

NEWLY ADDED CLAIMS:

---

B2 14. The electronic device of claim 8, wherein said first